W. H. WAID.

STRAINER.

APPLICATION FILED DEC. 16, 1908.

919,797. Patented Apr. 27, 1909.

Fig 1.

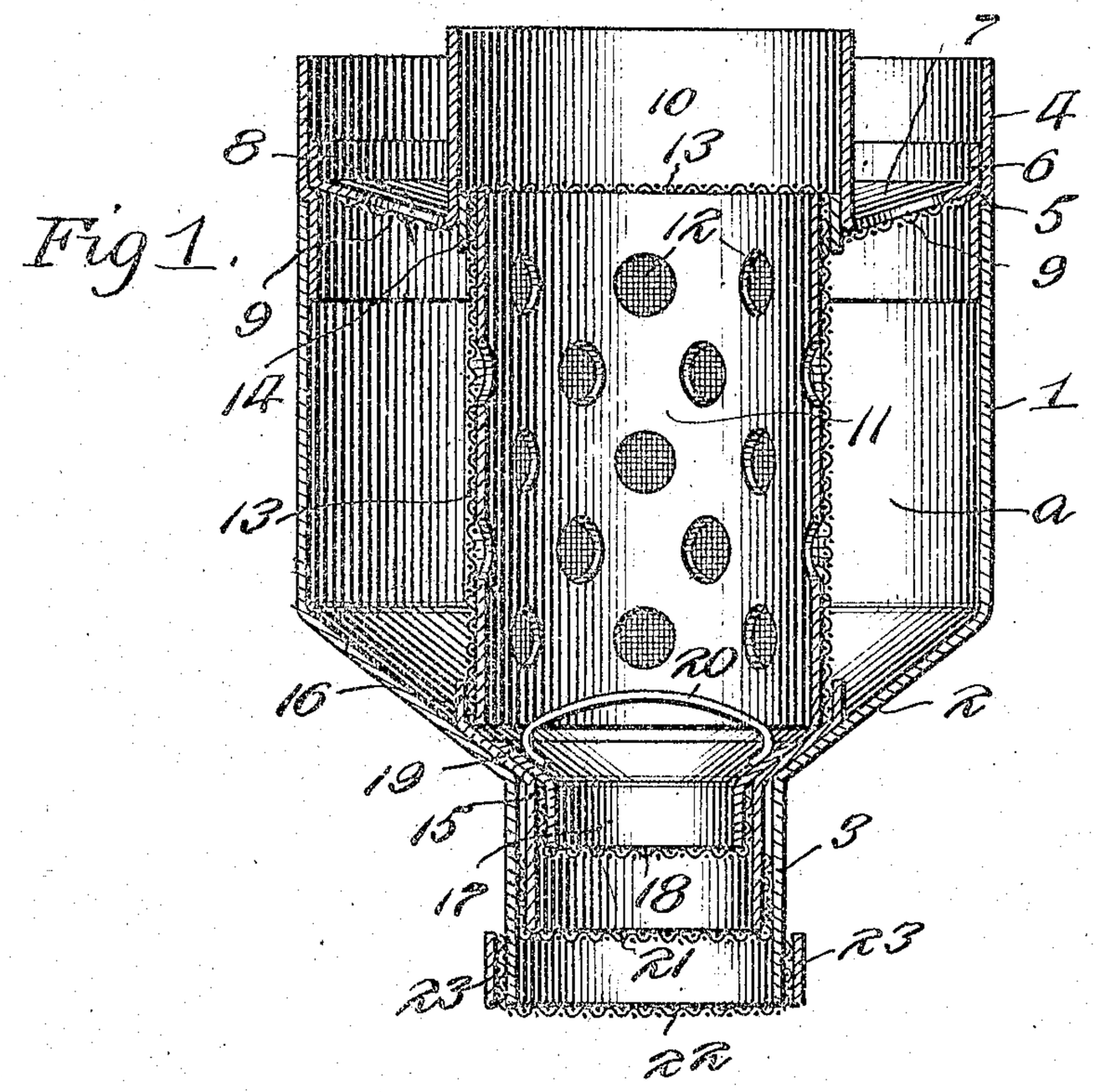
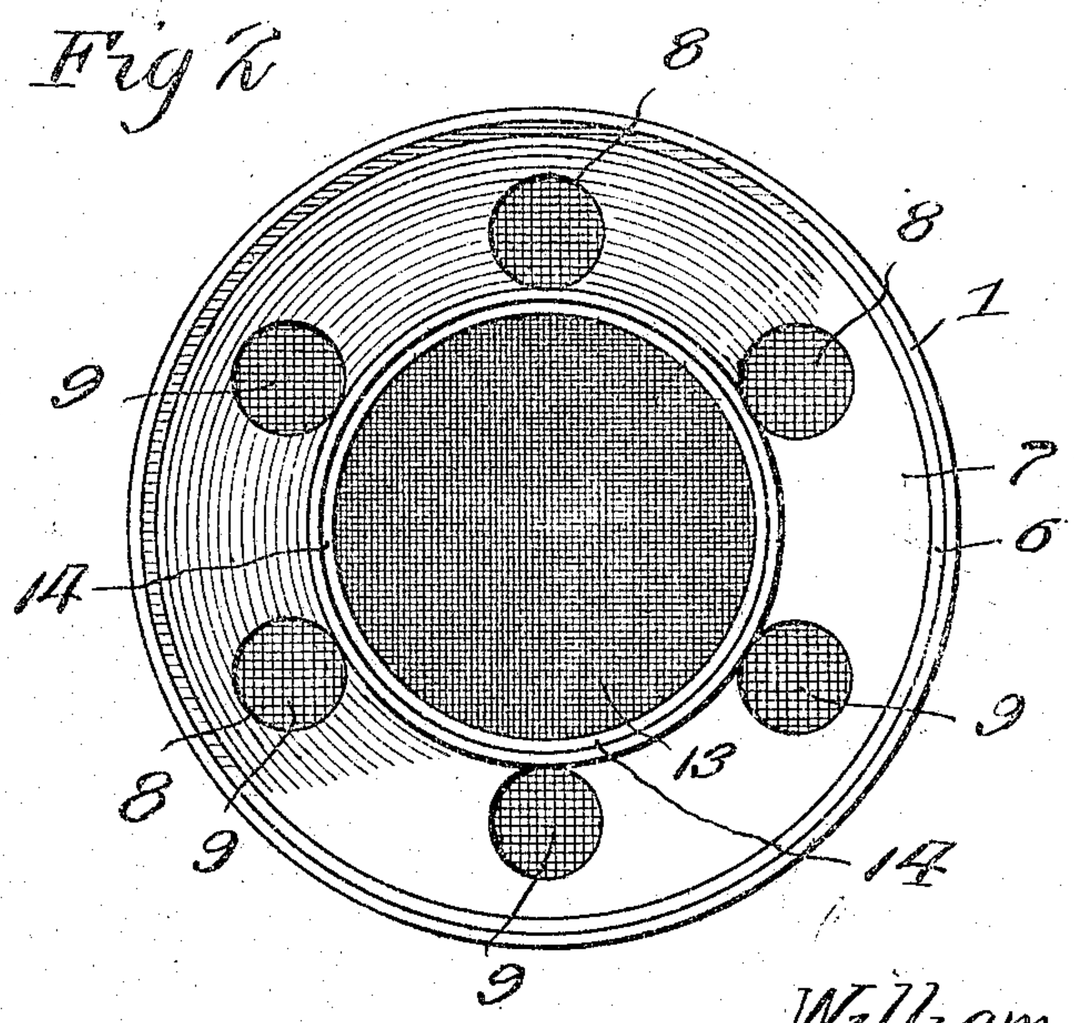



Fig 2




Witnesses

Hugh H. Ott

E. F. Bonnyear

Inventor

William H. Waid

By Victor J. Evans

Attorney

# UNITED STATES PATENT OFFICE.

WILLIAM H. WAID, OF RICE, MINNESOTA, ASSIGNOR OF ONE-FOURTH TO ORRIN J. WAID, OF ST. PAUL, MINNESOTA, ONE-FOURTH TO JOHN GAZETT AND ONE-HALF TO IDA F. WAID, OF RICE, MINNESOTA.

## STRAINER.

No. 919,797. Specification of Letters Patent. Patented April 27, 1909.

Application filed December 16, 1908. Serial No. 467,874.

*To all whom it may concern:*

Be it known that I, WILLIAM H. WAID, a citizen of the United States of America, residing at Rice, in the county of Benton and State of Minnesota, have invented new and useful Improvements in Strainers, of which the following is a specification.

This invention relates to strainers designed more particularly for straining milk, and one of the principal objects of the same is to provide a strainer, the parts of which are readily detachable for cleaning purposes.

Another object of the invention is to provide a strainer in which cheese cloth or other reticulated fabric may be used as the straining element and thus permit the same to be readily cleaned after use, the parts of the strainer being also detachable for cleaning the same.

Still another object of the invention is to provide a strainer in which the milk will be required to pass through a number of screening elements of different degrees of fineness.

These and other objects may be attained by means of the construction illustrated in the accompanying drawing, in which,

Figure 1 is a vertical section through a milk strainer made in accordance with my invention. Fig. 2 is a top plan view of the same.

Referring to the drawing, the numeral 1 designates the outer casing of the strainer provided with inclined walls 2 and a reduced outlet portion 3. Fitted into the upper end of the casing 1 is a supporting ring 4 provided with an offset shoulder 5 which bears against the upper edge of the casing 1 when in place. The ring 4 is removable from the casing 1, and secured inside said ring is a straining element, the outer edge of which is turned upwardly to form a flange 6 which fits snugly within the ring 4 and rests upon the top of the shoulder 5. From the flange 6 the bottom 7 of the straining element is inclined and provided with a series of openings 8 which may be covered with a suitable reticulated fabric 9. At the inner edge of the wall 7 an upwardly extending annular flange 10 is provided. Within this flange is a hollow cylindrical element 11 provided with a series of openings 12, said element being open at its opposite ends and of equal diameter from end to end. A piece of cheese cloth or other reticulated fabric 13 is placed around the element 11, and this fabric is held in place by means of a clamping ring 14 at the upper end. The lower end of the element 11 is seated in an annular strainer support 15 having an upturned flange 16 at its upper end which incloses the reticulated fabric and holds it firmly in place. Within the strainer support 15 is a strainer ring 17 provided with a reticulated fabric bottom 18, said element having an enlarged upper end 19 which rests within the support 15, and said ring 17 being provided with a suitable handle 20 by means of which it may be removed and detached from the strainer. Secured to the lower end of the support 15 is a piece of reticulated fabric 21 held in place by means of the outlet portion 3 of the casing 1. At the lower end of the casing 1 a piece of reticulated fabric 22 is secured by means of a clamping ring 23.

The operation of my invention may be briefly described as follows:—The milk is poured into the casing 1 outside the flange 10, the milk passing down through the openings 8 and from the chamber *a*, passing inward through the openings 12, and from thence down through the strainer members 18, 21 and 22. Any milk which may be poured into the center portion would be required to pass through the reticulated element 13, and thence down through the strainer. After the straining operation, all the parts of the strainer may be detached, and the fabric used may be thoroughly washed for reusing.

From the foregoing it will be obvious that a strainer made in accordance with my invention will thoroughly strain the milk, and that the strainer may be readily taken apart for cleaning, the reticulated fabric straining elements being quickly cleansed and ready for reuse.

I claim:—

1. A strainer comprising an outer casing, a strainer ring supported upon the upper edge of said casing and provided with a strainer element consisting of an inclined perforated wall having reticulated fabric under the openings therein and an upturned annular flange, a hollow cylindrical strainer element provided with a series of openings covered with reticulated fabric, and a series of strainers in the lower end of the casing.

2. A milk strainer comprising a casing having a reduced lower end, a series of re-

movable strainers in said reduced end, a hollow cylindrical straining element provided with a series of straining openings therein, and a removable ring having an inclined wall provided with straining openings.

3. A strainer comprising a casing, a hollow perforated straining element removably secured within said casing, and a series of straining elements removably connected to the lower end of said casing.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM H. WAID.

Witnesses:

OLIVER CLINHART,

JULIAN V. SAYKE.